The Fool's Cap

By ELSA VAILE BLODGETT

The little red schoolhouse was deserted except for the teacher, busy at her desk writing lugubriously to her fiance of the trials and tribulations of the country schoolteacher, and a sad faced, starved looking boy, seated on a high stool and wearing a dunce's cap on his head. He had twisted himself around so that the blackboard sheltered him, and, his forehead pressed against its hard, cold surface, he was weeping bitterly.

All the afternoon session Neal Morse had sat thus, the cynosure of all the scholars. He had missed his lessons and had been duly decorated. To enforce her displeasure, Miss Edson had continued his penance for an hour after the others had been dismissed.

—"and just now a provoking dunce and dullard to discipline," wrote the schoolteacher.

If she had said a poor crushed soul, broken and bleeding, she would have been nearer the mark. Poor Neal Morse was what people were making of him. He was an orphan, his only relative was a hard-hearted stepmother. He had been made to feel the cruel stings of dependence and common jest, until his spirit was extinguished. The children of the rich spurned him, the more humble ones found him unsocial and tabooed him. All the time his wistful eyes sought a friend, never to find one.

Abruptly the boy lifted his tear-stained face. A low musical utterance aroused him—

"S-st!"

He looked up to smile in a grateful but wan and forlorn way. The open window at his side framed an eager-faced, golden-haired little miss, a warning finger raised. Then it beckoned, and she said cautiously:

"I've got it all thought out about you. Creep out of the window. I want to tell you lots."

If any other scholar had suggested this bold proceeding Neal would have resisted with utter disregard. But Juttie Marsh! Her eyes seemed to lure him, her sweet, friendly smile gave him confidence. She was the one soul in the school who had always greeted him pleasantly, and had

Had Continued His Penance for an Hour.

cried, instead of laughed like the others, when he was placed on the stool of repentance wearing the fool's cap.

Neal glanced at the schoolteacher. She was at some tender passage in her missive and deeply engrossed.

"It's awful!" he uttered, as he slipped through the window to have his hand seized by Juttie, and they ran towards a patch of sheltering bushes stretching into the woods beyond the schoolhouse. There, gloriously flushed and panting, Juttie dropped a little parcel to the ground, herself, too, and then drew Neal to her side. She caught his hands and held them and faced him, her bright eyes looking down into the yearning, famished depths of his own.

"Now, listen," she said, sprightly and full of her plan. "You know I was always your friend, and when the others laughed at you I cried. I pitied you, too. I was telling the folks at home about you last night, and how people say your wicked stepmother abuses and starves you. And papa had just been reading a book about a boy just like you. And he got tired of blows and hunger, and went away, and got rich, and came back and had money enough to buy up the whole town. And I thought about it all night and—you must run away from home."

"I daren't!" fairly gasped Neal, and then: "Now that I've got a friend like you, I don't want to leave."

"You dear boy!" cried Juttie, "but you must. I've brought you a package of cookies and some sandwiches, and I got 50 cents out of my savings bank, and there they are—"

"Oh, no! no! I couldn't!" exclaimed Neal.

"But you've got to. If you don't I'll cry all night," declared the persistent little miss. "You see, I love you because you are so poor and so lonely. And I'm going to wait for you, and when you come back I'm going to marry you."

Neal Morse dropped his head to her shoulder and burst into a new flood of tears. She put her arms around his neck. She kissed him on both cheeks. She told him he must go before his escape from the schoolhouse was discovered, and he left her, looking backward till he reached the deep forest, a leafy arcade framing a picture of the only friend he ever had, and one that he would never forget. But as the years passed on Juttie forgot. Life did not bring her the joy and serenity her radiant nature deserved. Her parents died, she married a man who turned out to be a gambler, and worse. When he died her only regret was that he had left her penniless.

At twenty-four Juttie Roberts found herself alone in the world in the heart of a great city, with a little two-year-old child, sewing at starvation wages to keep body and soul together.

All these years Neal Morse had cherished her memory devoutly. The gloom of his boyhood life had clouded his early manhood, making him a silent, lonely being, but, in a certain field, he had made his way successfully. The fool's cap that had fitted him at school seemed to have a fatalism about it. Once he had stolen back to his native town to find Juttie married.

One evening Mrs. Roberts was seated in her poor, bleak room sewing, her little one playing with some scraps of cloth on the floor, when there came a knock at the door.

"You are Mrs. Roberts, I assume?" spoke the man whose summons she answered, and, as she wonderingly nodded assent, he continued: "I have tried to find you for some time. I have a peculiar mission, Mrs. Roberts. Many years ago a member of your family loaned me some money. I have become able to repay it at last, and, as the only surviving member of your family, I have brought it to you."

Into her lap he dropped a package of bank notes.

"There is a thousand dollars there," he said, lamely evading any further explanations, and bowed himself out of the room.

Many a time after that she marveled that she had accepted the money without learning more of the giver and the avowed debt, and then one evening a month later she had taken little Ida to a vaudeville entertainment to make a startling discovery.

One act was the star presentation of the program, and its exponent of fun was the mirth of the occasion. A clown wore a clown's fool's cap. In the midst of his act Mrs. Roberts suddenly recognized the man who had brought her the thousand dollars, and as well her early schoolmate, Neal Morse.

Like a flash of lightning the past came back to her. With concurrent suddenness the thought flashed through her mind that the story of the debt was in part a fiction. It was possible that this man cherished her words and kindness through all the years!

She knew this to a verity the next day, for she made sure that a note got to him. In confusion and confession the story of his fidelity came out.

Her heart opened to the man who had accepted fate uncomplainingly, whose crushed spirit had been driven to seek a singular employment.

Neal Morse read her soul aright. When he left her his heart was aglow with new hope and new plans. He would win her and happiness, he resolved. He had some means. For Juttie's sake he would seek new employment.

So he resigned from the stage, and that night burned the fool's cap that had been his badge of servitude—and lo! in its place Juttie fancied she saw substituted the halo of the love and goodness and fidelity of a true man.

CAT RECOGNIZED A FRIEND

And Man Wants to Know How He Did It If It Was Not by Power of Sight.

"There be those," said a nature faker, "who say that domestic animals do not recognize people they are associated with by their sense of sight. And maybe they are right—I am no expert faunalist—but I wish to state a fact of which I am personally cognizant and which pertains to the subject under discussion.

"Yesterday morning after I had breakfasted around the corner I approached the house where I lodge and from some distance I observed our large black cat, Bill, sitting on the front steps before the closed door. It was evident to me, and I am pained to make the statement that Bill had been out all night.

"Several persons passed as he sat there before I came within range of his vision, but he gave no sign to them what he was there for. He did not see me until I was within forty feet of him, so intently was he studying those nearer, but the instant he saw me he came running to meet me, rubbing against my legs and showing other indications of his pleasure in meeting a real friend in need. Then he dashed ahead and was at the door when I got to it.

"Once inside he had no further use for me and scurried away toward the kitchen. Cats have no power of scent, I believe, so he didn't nose me out of the crowd of unfamiliars passing before him. This being true, how did Bill know me except by sight?"

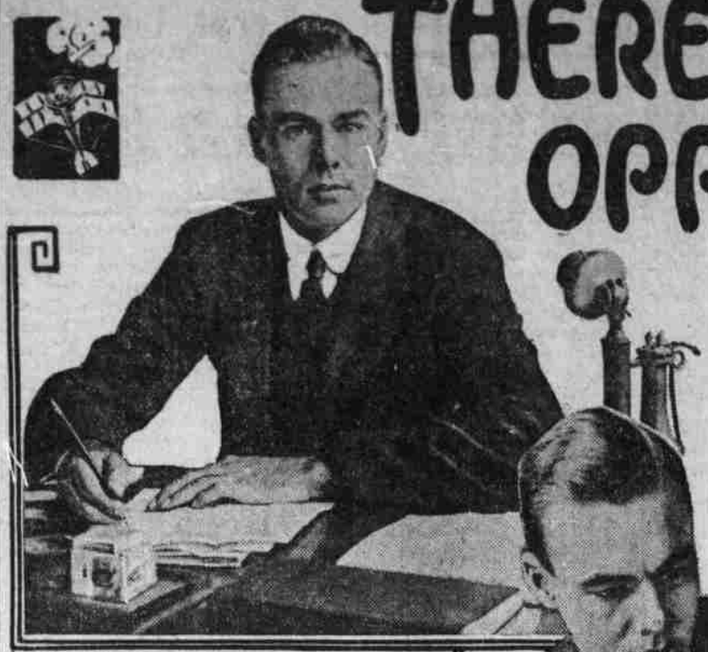
Lightning Rods.

The reason a lightning rod has a sharp point is because a fine point offers no resistance to the discharge of electricity and in order that a cloud may be emptied of it noiselessly and harmlessly. The degree of resistance is in proportion to the surface of the object. If the rod were surmounted by a knob, for instance, the discharge would be violent. But many a lightning rod has received an electrical discharge when the people in the building below were calmly unconscious of the fact. Noncorrosive metal is used for the point of the rod, as corrosion make resistance. The difference between a point and a ball is shown in discharging a battery. The full charge from a large battery would be received quietly on a metal point, while a moderate charge from a small one would explode violently in a ball. It is said that a full charge may be passed harmlessly through a person's body if received on the point of a needle, whereas the same charge received on a discharger with a ball or knob on the end would mean instant death.

Truthful James.

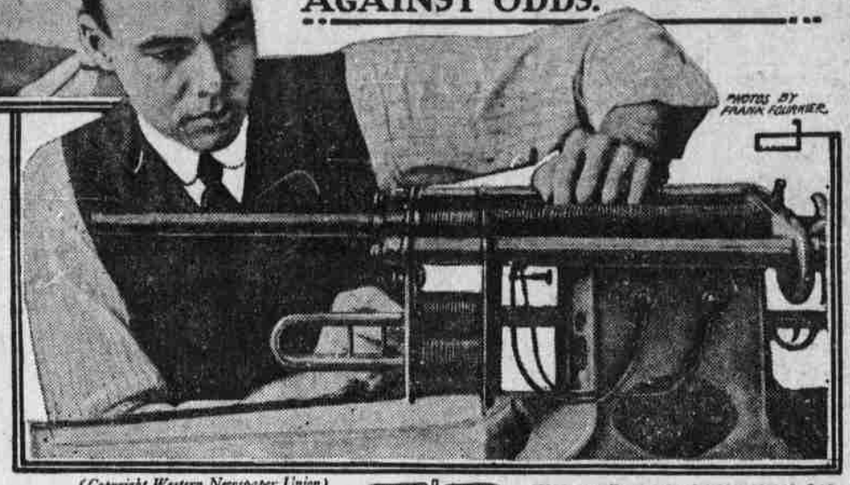
"Here's James in his letter boasting of all the beatings he helped to give the enemy. I'll bet he never beat anything."

"Oh, yes, he did. I'll venture to declare that every time there was a battle he beat a retreat."



THERE'S ALWAYS OPPORTUNITY

THIS YOUNG MAN HAS INVENTED A NEW FORM OF AEROPLANE THAT MAKES FLYING SAFER. WEALTH IN SIGHT FOR HIM AFTER LONG STRUGGLE AGAINST ODDS.



T. CHARLES RUSSELL

By JERLE DAVIS.

IF a young follow has the right stuff in him there is no limit to his soaring—especially if he invents an aeroplane that is as "safe as a rocking chair." And this is the situation which Mr. T. Charles Russell, a Chicago inventor, faces. After five years of hard work and fighting big odds he stands on the threshold of wealth and fame.

Seven or eight years ago, Russell was a freshman in the academic course at Northwestern university, Evanston, Ill. He had an uncanny knack for understanding the why and wherefore of electricity and mechanics, and was able to earn his way through college by doing odd jobs for a light and power concern.

During the four years he put in at literature, languages, mathematics and other subjects contained in a college arts course he was tinkering along on the side with toy aeroplanes of his own devising. Russell was slowly working out the details of a dream—one of the kind of dreams that have made Edison, the Wrights, Hammond, Bell and Marconi scientific conjurers.

After he had received his bachelor of arts degree, this young man—he was born at Midland, S. D., twenty-seven years ago—went into the engineering school and specialized in physics and engineering. Then he began to experiment with his aeroplane for all he was worth. Because it wasn't a part of the regular course, Russell had trouble getting shop space in which to do this work. The school authorities, he says, had mapped out a prescribed course and they considered that a deviation from it would mean confusion in the ranks.

He even went before the trustees and made a plea for special concessions, but without success. Sympathetic members of the faculty came to the rescue, however, and Russell found room in Dearborn observatory to make experiments at night. Dozens of models were made, tried out and broken. The experiments had gone forward with fair steadiness for three years and longer, when the young man felt that he had discovered and worked out satisfactorily the principles of aerodynamics he had sought.

That was three years ago. Then he went gunning for patent rights. It was easy enough to get simple patents, but the inventor wanted basic patents. Simple patents cover processes and methods, while basic patents cover principles. So after another long wait, voluminous correspondence and endless dealing with lawyers, Russell was notified a few weeks ago that the basic patent rights were his.

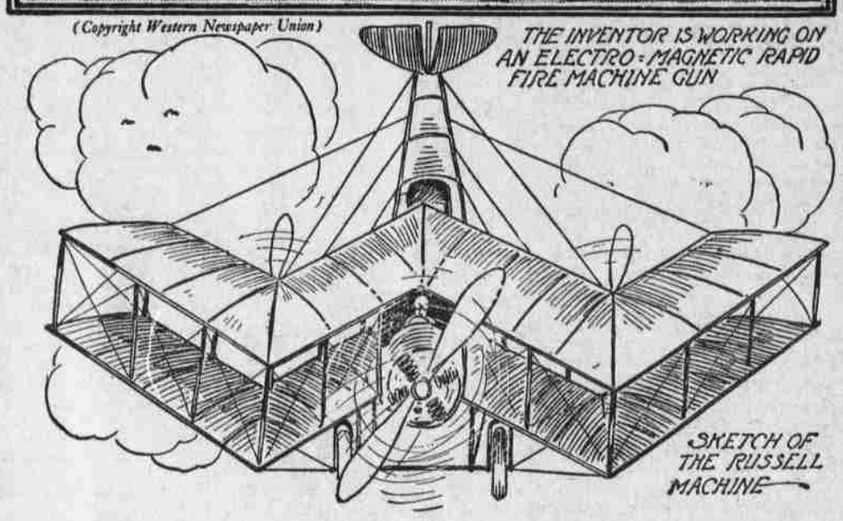
He carried the glad news to a fraternity friend. The friend carried it home to his father. The father went East on a business trip and told some Boston capitalists. And the Boston capitalists sent an aviator expert to Chicago to talk to young Russell and see what he had. What he had was "the goods" evidently, for a short time afterward a company was organized, foreign agents—supposed to be representatives of the Anglo-French-Russian allies—signed contracts, a big factory was leased and the inventor went on to the plant to supervise the manufacture of the machines.

Just before Russell went East the Chicago newspapers printed brief accounts about the patent grants and the company's formation. Very little was said about the inventor. When he was approached for the "inside story" of his labors Mr. Russell wasn't easy to "get at." He was found in a little chicken-coop office which occupies a corner in the machine shop which he calls his own. His sleeves were rolled high and his hands were grimy. The clatter and whang of machinery made conversation difficult, but not so difficult as the young inventor himself made it—for he is a shy and reticent person, who would make a poor self-advertiser. But once he began to talk about his machine he was a whirlwind of impulsive speech, making quick, draftsmanlike sketches to illustrate his points.

His aeroplane differs in shape from all other known makes. It is a biplane. That is, it has two sets of wings, one set several feet above the other. In other machines the planes spread straight across, and with the body and tail form a big capital T. In the Russell machine the wings form a double V, like this: VV. The tail is attached to the place where the letters join and extends to the rear. The narrow points of the letters form the front of the machine, and the pilot, passengers and engine company occupy a sort of canoe which rests where the wings and tail join. The lower wings extend forward of the upper ones—like a man with an undershot jaw. The two propellers twirl on either side of the tail just back of the wings.

Mr. Russell didn't have war in mind when he was working on his invention. His idea centered in commercial possibilities. So long as the aeroplane remained unstable—so long as a driver had to keep his hands on the controls to prevent the machine's capsizing—it would remain a sporting proposition. But when the time came that, by improvements in the aeroplane, the driver need only crank up and guide, simply as he would guide an automobile, the flier would be very useful in business and pleasure.

In the double-V machine the young inventor believes he has discovered the great secret of inherent stability. Placed in the positions described, the wings present a broad surface to air currents on all sides. "The dangerous air pockets are no longer death gaps in the atmosphere," Russell declares.



All present types of fliers—that is, all the new ones both in this country and abroad—use a gyroscope control. This is a sort of governor, like the governor on a stationary steam or gas engine, that automatically warps the aeroplane wings to meet constantly varying air surfaces when the machine is in flight. These devices are just emerging from the experimental stage.

With the gyroscopic stabilizer doing the work, what is the advantage of the Russell machine? Let Russell tell:

"The stabilizing devices are all artificial controllers. If the stabilizer gets out of fix when the machine is 3,000 feet above ground it means danger and possible death for the passengers. The safe machine is one that needs no such controller. It is a machine whose very shape is an automatic controller—a real automatic controller that cannot be tinkered with if the machine is to leave the ground at all."

This new aeroplane can be made in any size. It is understood that the fliers being constructed in Boston will have a wing spread of a hundred feet or more and will carry two independent engines, each developing 150 horse power. Machines of this size and power are capable of carrying half a dozen passengers, one or two rapid-fire guns, fifty to a hundred large explosive bombs, fuel for a 500-mile flight, and scientific instruments for navigation. They can travel rapidly, too—fifty to ninety miles an hour.

It is easy to imagine the value of such machines in peace as well as in war. Already the government is experimenting with aeroplane mail routes, and Postmaster General Burleson has recommended the establishment of regular aero-mail service. The possibilities are without limit, it seems. And for war—well, we know a little of what they are doing with aeroplanes in Europe. All the chief belligerents are building huge planes, triple-winged and engined, that in a pinch can fly close to a thousand miles and carry half a dozen men with small cannon, ammunition and deadly bombs of large size. In a report which he has submitted to President Wilson, and which will be made public soon, Secretary of the Navy Daniels tells of some remarkable developments in aeroplane construction by American designers and inventors. He mentions specifically "an aeroplane that practically sails itself. About all the aviator has to do is to crank up and sit at the steering wheel."

Mr. Russell's explanation of the principle involved in his aeroplane is Greek to the layman.

"The problem is to maintain the center of upward pressure to coincide with the center of area at all times, no matter whether the machine is in direct forward flight or is falling. This problem I have solved, if the success of all my experiments proves anything."

There's a young inventor either at work or dreaming over work to be done wherever you go in this broad land of ours. In the towns and cities you see amateur wireless receiving stations strung from barn gables to attic windows. In the country the youngsters are tinkering over the tool benches—working away at some idea that may revolutionize an industry.

The history of young Mr. Russell should be an inspiration to every youth born without a silver spoon in his mouth. This inventor saw the light of day first in a South Dakota village. He spent some of his childhood at Evanston, another small town. He received his common school and high school education at Paw Paw, Mich., which is no metropolis. He has had to paddle his own financial canoe and "help the folks" besides. He has been denied opportunity and has forced his own pathway.

Does he expect riches to come immediately? This is his point of view:

"I expect to get royalties later. My invention has to prove its worth first. If wealth comes, it will be the reward for toil and discouragement. I certainly don't expect to sit around and wait for money to be dropped into my hat.

"Let me pay a tribute to two men who have stood by me and helped to make this aeroplane invention possible. One is Prof. Philip Fox of Dearborn observatory. The other is Prof. Henry Crew of the physics department at Northwestern. Mr. Fox helped me with my experiments as much as one man could help another. As for Mr. Crew—the training I got under him in learning to analyze things is priceless.

"This analytic training has taught me to sit down with a vagrant idea and pursue it to first principles—to get to the heart of every proposition."

Mr. Russell's first money-making invention was an electric blanket. This device looks like an ordinary bed comforter. Its stuffing, however, is interwoven with fine wires incased in asbestos. Connected with an ordinary light socket the blanket develops considerable heat—enough, say, to keep an outdoor sleeper comfortable when the mercury is huddled at the bottom of the tube. Other inventions are an aero-fan, said to be an improvement on ordinary cool-breeze makers; an electric heating pad, similar in principle of construction to the blanket, and a thermostat for controlling electric heat.

What promises to be another important invention, however, is an electro-magnetic rapid-fire gun. Mr. Russell has been working at odd times on this idea for several months. The principle is the expulsion of missiles from a gun without the use of explosive material, he says, and experiments with workshop models have been highly gratifying.

"It may be years, though, before I perfect it," the young man smiles. "I have the idea fixed in mind and it is a matter of developing the idea. Someone else may produce a successful gun of this type before I do. I have a gun that will shoot all right, but it isn't ready for the war market by a long shot."

And just to show you that a rising young inventor is an ordinary human being like the rest of us, here's one on Mr. Russell: He didn't want the photographer to take his picture as he stood with his sleeves rolled up before a work bench because he thought that the dense growth of black hair on his arms would show when the picture appeared in the paper. Furthermore, he was very careful to fix the knot of his four-in-hand tie "just so" before he said, "All ready!"

VULGAR DISPLAY OF WEALTH.

"My face is my fortune," said the conscious beauty.

"Well, it isn't necessary for you to be constantly flashing your roll," remarked the male cynic.—Judge.

TECHNICALITIES OF THE INDICTMENT.

The average man will never realize what an extremely technical paper the indictment is, and how the rules in it must be observed against all common sense. It is one of these rules that the venue—the place where the crime is said to have been committed—must be stated in the indictment and must be proven at the trial. In Campbell county, Virginia, a prisoner named Anderson was put on trial for murder. The evidence showed that the murder took place at Anderson's store, about one-quarter of a mile from Lynches Station. The indictment did not say the murder was committed at Lynches Station and that Lynches Station was in Campbell county. It was so well known to everybody that Lynches Station was in Campbell county that it never occurred to anyone formally to introduce evidence in proof of that fact. Nevertheless this was a violation of the rules, and the supreme court reversed the verdict, holding that it would not take judicial notice that Lynches Station was in Campbell county, and sent the case back for a new trial.—Melville Davisson Post in the Saturday Evening Post.

MANLIKE TEETH OF ANCIENT APE.

Prof. A. G. Thacher, an eminent British geologist, in an article in Science Progress, mentions the recent discovery of the jaw of an ape which has teeth more closely resembling human teeth than do those of the chimpanzee and orang-utan, man's nearest relatives in the animal world.

In these animals, and in all of the living species of the ape, the cuspids are much larger and longer than in man. But in this ancient ape, which lived, according to geologists, hundreds of thousands of years ago, the cuspids were small, like those of man. This is regarded as an indication that the development of the cuspid teeth of apes resulted from the necessity for their use in tearing off husks of nuts and for like purposes.

WAR HAS ITS LIGHTER SIDE

British Soldiers Quick to Seize Opportunity to Have a Little Fun When Occasion Offered.

Even in their odd moments of leisure, the men who are fighting the grim battles of the trenches appear in a dramatic light. What could be more pathetic, considering the fate that awaits many of those concerned, than this bit of horseplay, which is described in an officer's letter in Great Deeds of the Great War.

"Many thanks for the parcel. The mouth organs arrived when we were resting and were billeted in a very large vinery. We formed up a band and marched round the building. We had all sorts of instruments in the band; the big drum was an empty packing case, and the drumstick an intrenching tool handle with a piece of sacking tied round the end; empty biscuit tins were side drums; tin whistles, squeakers and combs and paper came in as well.

"Candles and electric lamps gave the illumination, and it was really very funny to see this band of about thirty marching round the building, headed by the self-appointed drum major and conductor in a goatskin, twirling a big stick that I use in feeling my way to and from the trenches. After marching round once or twice, we formed up in a ring in the middle and had vocal and instrumental turns until our feet began to get cold, when we had another march round. Of course it was all very silly, but we enjoyed the fun."

Awkward.

An amusing story was told by Mrs. E. Rennie of Harrogate in opening a bazar at Eccleshill. A visitor to a hospital for soldiers was surprised to hear one of the patients being addressed by the nurses by his Christian name, it being customary to address patients by their surnames only. Upon inquiry as to why this distinction was accorded to the particular soldier referred to, the reply received was:

"Well, we can't very well call him by his surname."

"But why not?" queried the somewhat astonished visitor.

"You see," was the overwhelming answer, "his surname is Love, and it's rather awkward—."—Tit-Bits.

Money Talks.

Times are a trifle hard in the Cotton Belt just now and money is a little scarce. Evidently Uncle Ephraim thinks so, for he came up to his supply merchant the other day and said:

"Marse John, times is tighter than I is ever seen 'em before. Do you know, Marse John, I can't get no money at all? No, sir, I can't get nuthin'! I can't even get hold of a nickel! Do you know, Marse John, hit actually looks like I'll have to go to preachin' in order to make a livin'. I done it once and I ain't too good to do it again!"—Saturday Evening Post.

He Was Too Candid.

There is a Cleveland man whose business often takes him to New York. He doesn't stay long—two days at the most—but it seems long to his wife. And the other day his wife kicked.

"My dear," she said, "the next time you go to New York I want you to take me along."

"You wouldn't have a good time," he answered.

"Why wouldn't I have a good time?"

"Because you have such a jealous disposition."

The next time she's going if she has to travel on a different car.—Cleveland Plaindealer.

No False Pride.

Willis—Bump is a good scout; absolutely no false pride about him.

Gillis—That's right. On a windy day he always chases his hat before chasing his toupee.—Judge.

Peace at Any Price.

"Do you let your wife have her own way?"

"Certainly; and most of mine."—Boston Evening Transcript.

Jealousy is your verdict against your own charms and in favor of your rivals.

The wife of a gambler never knows whether it is going to be a sealskin coat or a calico wrapper for hers.